8. Doctor-diagnosed High Cholesterol

Measure Definition: *"Have you ever been told by a doctor, nurse, or other health professional that your blood cholesterol is high?"* ***[Yes]***

Why is high cholesterol important to public health?

High levels of cholesterol and triglycerides increase the risk for heart disease, the number one killer in Utah. The National Heart, Lung, and Blood Institute defines high blood cholesterol as 240 mg/dl or greater and borderline high cholesterol as 200 to 239 mg/dl. Cholesterol and other fats cannot dissolve in the blood. They must be transported to and from the cells by special carriers called lipoproteins. There are two types of lipoproteins that are important in our bodies: low-density lipoprotein (LDL), which carries cholesterol to the arteries, and high-density lipoprotein (HDL), which removes cholesterol from the arteries. High levels of LDL and low levels of HDL are related to an increased incidence of heart disease including heart attack, atherosclerosis (hardening of the arteries), and coronary artery disease (narrowing of the blood vessels that supply blood and oxygen to the heart). Individuals with high cholesterol should take steps to reduce and control their cholesterol levels.[16]

Risk factors for high cholesterol

Everyone needs cholesterol. It is necessary for building cell walls and the production of sex hormones, vitamin D, and digestive juices. Cholesterol is necessary to help every organ in the body function properly. The body is able to make all the cholesterol a person needs. Cholesterol is also found in the animal products that we eat such as eggs, dairy products, meat, and poultry. When a person ingests too much cholesterol or the body makes too much cholesterol, it can build up in the blood vessels. The largest contributor to high blood cholesterol is eating a diet high in cholesterol. Physical activity can help lower the amount of LDL cholesterol in the body and increase the amount of HDL cholesterol. Increasing the amount of HDL in the body is beneficial because HDL cholesterol removes the LDL cholesterol from the arteries and transports it to the liver where it is used. Obesity, smoking, and excessive alcohol consumption can also increase the risk for high cholesterol.[9,17-19]

High cholesterol in Utah

The percentage of persons who have had their blood cholesterol measured in the past five years was 62.8% in 2005. This means a large number of Utahns who have not been tested could have high cholesterol and not know it. The data in this report should not be interpreted as the incidence of high blood cholesterol in Utah.

Between 2001–2005, the age-adjusted percentage of adults who had been told by a doctor that they had high cholesterol was 22.9%. The rate varied by local health district from a low of 20.4% to a high of 25.1%. None of the 12 health districts had rates that differed from the state. Two of Utah's 61 small areas had age-adjusted rates that were significantly lower than the state rate, and two small areas had rates that were significantly higher than the state rate. Overall Utah rates were lower than the U.S. rate. Eight small areas had rates that were significantly lower than the U.S. rate.

Rates for doctor-diagnosed high cholesterol have increased significantly over the past few years. From 1995–2005 the rate increased from 15.0% to 22.0%. Rates of respondents screened for high cholesterol did not increase significantly, which would suggest that actual rates of Utahns with high cholesterol are increas-

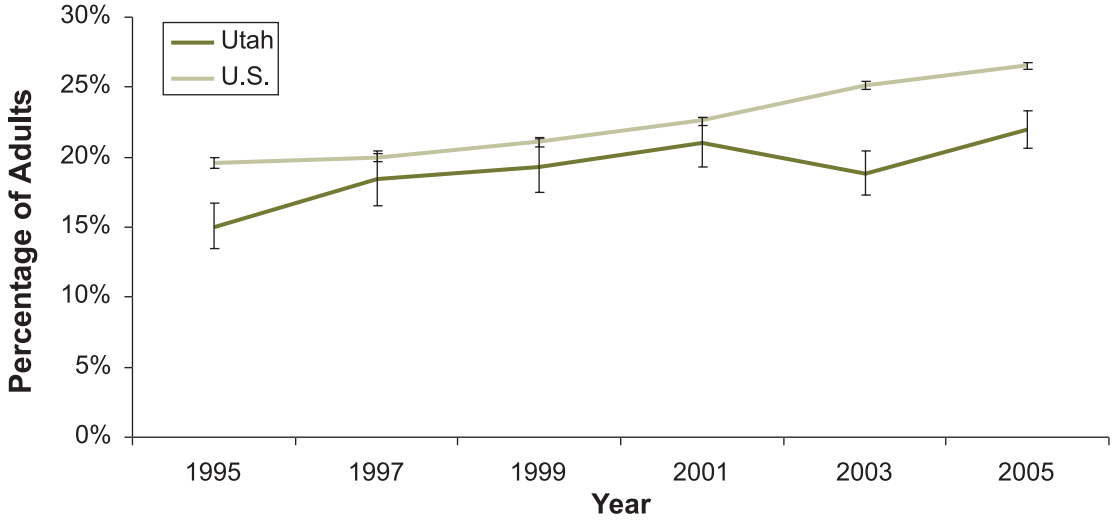
Utah Objective: Same as HP2010 objective.
HP2010 Objective (related) 12-14: Reduce the proportion of adults aged 20 years and older with high total blood cholesterol levels to 17% (age-adjusted to U.S. 2000 standard population).

8. Doctor-diagnosed High Cholesterol

High cholesterol in Utah (continued)

ing. Significant differences were not observed between genders. Rates of being diagnosed with high cholesterol increased with age.

Figure 8.A: Doctor-diagnosed High Cholesterol, Utah and U.S. Adults, 1995-2005

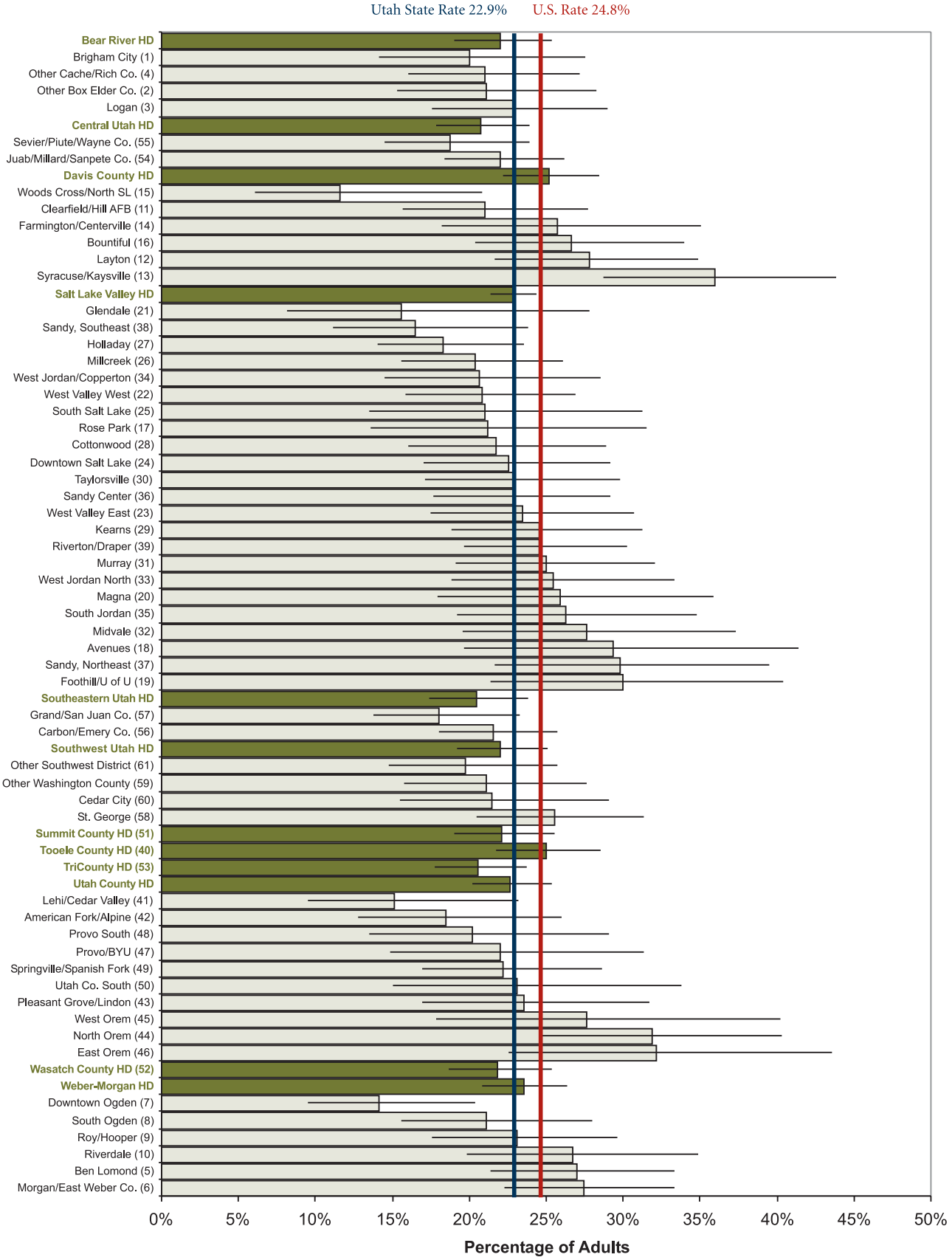


Prevention/Resources

The Heart Disease and Stroke Prevention Program (HDSPP) at the Utah Department of Health has a goal to decrease the number of heart disease and stroke-related deaths in the state. One way this is being done is by educating providers on the most current recommendations for cholesterol levels. This education also includes teaching physicians the suggested treatment of high blood cholesterol, and how to take a quick finger prick cholesterol test in the office. This is done so that they can give patients their results and counsel them at the initial office visit so patients who have a hard time following up with the physician will still be informed. For a copy of the manual that was produced for these teaching opportunities, please contact the HDSPP program at 801-538-6141. The HDSPP provides additional information at http://www.hearthighway.org. The National Institutes of Health provides resources, fact sheets, and answers to questions at http://health.nih.gov. The American Heart Association administers a comprehensive website for consumers and health care providers at http://www.americanheart.org.

8. Doctor-diagnosed High Cholesterol

Figure 8.1: Percentage of Adults Who Reported Doctor-diagnosed High Cholesterol by Local Health District and Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)



8. Doctor-diagnosed High Cholesterol

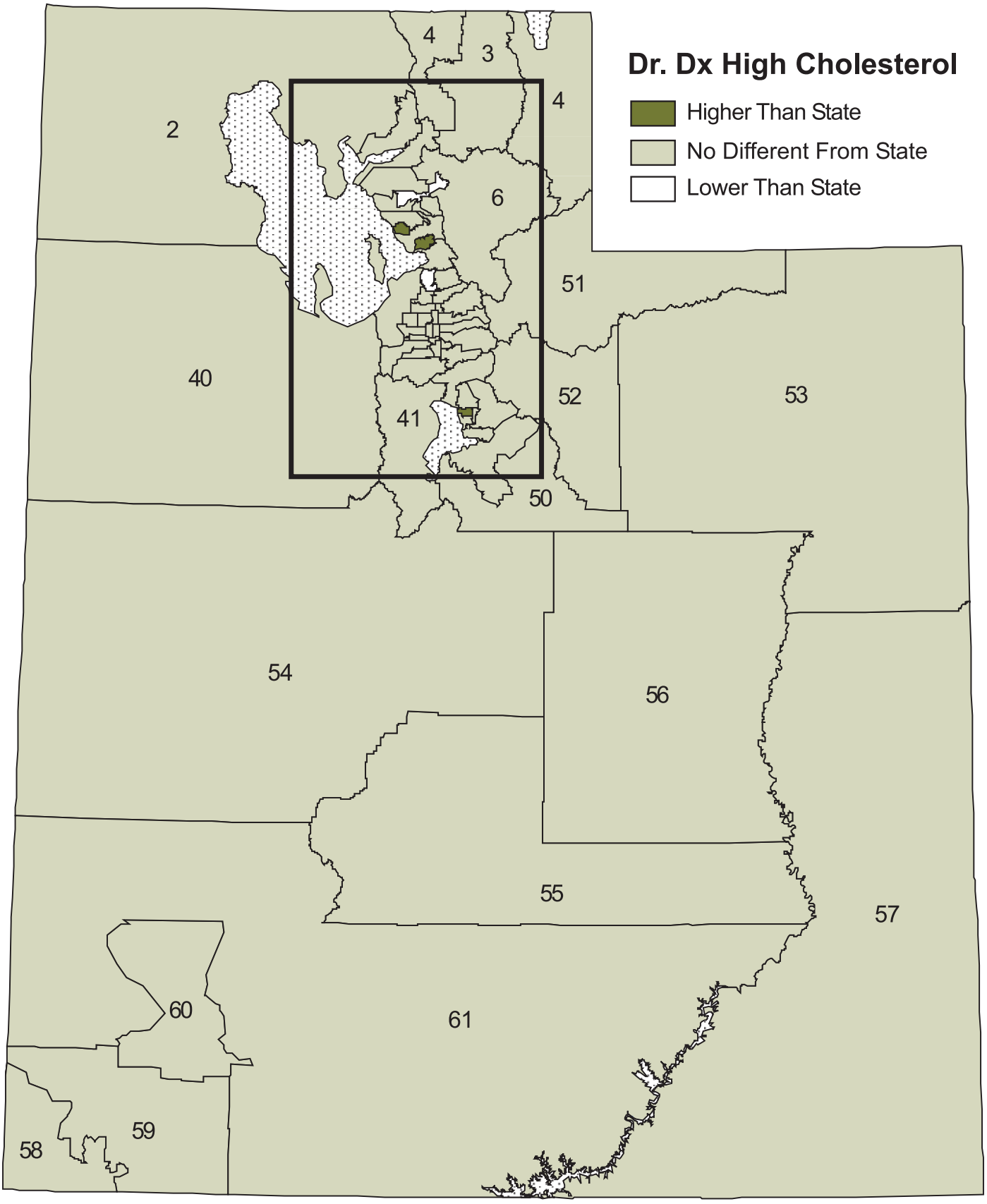
Table 8: Dr. Dx High Cholesterol by Health District, Small Area, Utah, and U.S., 2001, 2003, 2005

State Rank*	State, Health District, or Small Area	2003 Population 18+	Number of Adults With Dr. Dx High Cholesterol	Crude Rate	Age-adjusted Rate	95% Confidence Interval	
						Lower	Upper
	U.S.	217,803,051	54,995,270	25.3%	24.8%	24.6%	24.9%
	State of Utah	1,657,454	341,601	20.6%	22.9%	22.1%	23.8%
	Bear River HD	98,027	17,713	18.1%	22.0%	19.0%	25.4%
11	Brigham City (1)	14,566	3,028	20.8%	20.0%	14.1%	27.5%
33	Logan (3)	45,904	6,720	14.6%	22.8%	17.6%	29.0%
20	Other Box Elder Co. (2)	14,636	2,964	20.3%	21.1%	15.4%	28.2%
18	Other Cache/Rich Co. (4)	22,921	4,752	20.7%	21.1%	16.0%	27.2%
	Central Utah HD	47,558	9,721	20.4%	20.7%	17.8%	23.9%
28	Juab/Millard/Sanpete Co. (54)	31,637	6,685	21.1%	22.0%	18.4%	26.1%
9	Sevier/Piute/Wayne Co. (55)	15,921	3,062	19.2%	18.8%	14.5%	23.9%
	Davis County HD	175,027	40,204	23.0%	25.1%	22.2%	28.4%
49	Bountiful (16)	33,318	8,689	26.1%	26.6%	20.4%	34.0%
19	Clearfield/Hill AFB (11)	37,329	6,036	16.2%	21.1%	15.6%	27.7%
46	Farmington/Centerville (14)	19,034	4,947	26.0%	25.7%	18.2%	35.0%
55	Layton (12)	46,815	11,713	25.0%	27.8%	21.7%	34.9%
61	Syracuse/Kaysville (13)	24,542	7,758	31.6%	35.9%	28.7%	43.9%
1	Woods Cross/North SL (15)	13,989	1,441	10.3%	11.6%	6.1%	20.8%
	Salt Lake Valley HD	658,810	138,745	21.1%	22.9%	21.5%	24.4%
56	Avenues (18)	18,959	5,460	28.8%	29.3%	19.7%	41.4%
26	Cottonwood (28)	33,297	8,258	24.8%	21.8%	16.0%	28.9%
32	Downtown Salt Lake (24)	42,808	7,316	17.1%	22.5%	17.1%	29.1%
58	Foothill/U of U (19)	17,778	5,465	30.7%	30.0%	21.4%	40.4%
4	Glendale (21)	18,642	2,103	11.3%	15.6%	8.1%	27.8%
7	Holladay (27)	35,956	8,299	23.1%	18.3%	14.0%	23.5%
40	Kearns (29)	42,995	9,369	21.8%	24.5%	18.8%	31.3%
47	Magna (20)	15,623	2,959	18.9%	25.9%	18.0%	35.9%
53	Midvale (32)	21,672	4,538	20.9%	27.6%	19.6%	37.3%
13	Millcreek (26)	44,008	9,083	20.6%	20.3%	15.6%	26.1%
43	Murray (31)	24,072	6,487	27.0%	25.0%	19.1%	32.1%
41	Riverton/Draper (39)	41,391	8,307	20.1%	24.6%	19.7%	30.2%
23	Rose Park (17)	22,639	3,966	17.5%	21.2%	13.6%	31.5%
35	Sandy Center (36)	36,106	6,694	18.5%	22.9%	17.7%	29.2%
57	Sandy, Northeast (37)	18,245	4,879	26.7%	29.8%	21.6%	39.5%
5	Sandy, Southeast (38)	20,781	4,482	21.6%	16.5%	11.1%	23.9%
48	South Jordan (35)	20,931	5,423	25.9%	26.3%	19.2%	34.8%
17	South Salt Lake (25)	18,456	3,514	19.0%	21.0%	13.5%	31.2%
34	Taylorsville (30)	27,372	5,113	18.7%	22.8%	17.1%	29.8%
44	West Jordan North (33)	30,391	5,212	17.2%	25.4%	18.9%	33.4%
15	West Jordan/Copperton (34)	26,360	4,734	18.0%	20.6%	14.5%	28.5%
38	West Valley East (23)	35,527	8,971	25.3%	23.5%	17.5%	30.7%
16	West Valley West (22)	44,794	8,936	20.0%	20.9%	15.9%	26.9%
	Southeastern Utah HD	36,828	7,564	20.5%	20.4%	17.4%	23.8%
25	Carbon/Emery Co. (56)	21,451	4,458	20.8%	21.6%	18.0%	25.7%
6	Grand/San Juan Co. (57)	15,377	3,075	20.0%	18.1%	13.8%	23.3%
	Southwest Utah HD	116,150	26,076	22.5%	22.0%	19.2%	25.1%
24	Cedar City (60)	22,401	3,477	15.5%	21.5%	15.5%	29.0%
10	Other Southwest District (61)	15,384	3,664	23.8%	19.7%	14.8%	25.8%
21	Other Washington County (59)	32,503	6,813	21.0%	21.1%	15.8%	27.6%
45	St. George (58)	45,862	12,309	26.8%	25.5%	20.5%	31.4%
30	**Summit County HD (51)**	24,525	5,116	20.9%	22.1%	19.0%	25.6%
42	**Tooele County HD (40)**	32,458	7,569	23.3%	25.0%	21.8%	28.5%
14	**TriCounty HD (53)**	28,023	5,666	20.2%	20.6%	17.7%	23.7%
	Utah County HD	278,832	47,095	16.9%	22.6%	20.2%	25.3%
8	American Fork/Alpine (42)	26,819	3,902	14.6%	18.5%	12.7%	26.0%
60	East Orem (46)	14,955	4,765	31.9%	32.1%	22.5%	43.6%
3	Lehi/Cedar Valley (41)	18,752	2,181	11.6%	15.1%	9.5%	23.2%
59	North Orem (44)	25,965	5,920	22.8%	31.9%	24.5%	40.3%
39	Pleasant Grove/Lindon (43)	24,636	5,100	20.7%	23.5%	17.0%	31.7%
29	Provo/BYU (47)	39,401	5,520	14.0%	22.0%	14.9%	31.4%
12	Provo South (48)	48,138	4,125	8.6%	20.2%	13.5%	29.1%
31	Springville/Spanish Fork (49)	41,036	7,054	17.2%	22.2%	16.9%	28.6%
37	Utah Co. South (50)	17,363	3,301	19.0%	23.1%	15.1%	33.8%
54	West Orem (45)	21,774	3,893	17.9%	27.6%	17.8%	40.2%
27	**Wasatch County HD (52)**	12,514	2,520	20.1%	21.8%	18.7%	25.4%
	Weber-Morgan HD	148,702	33,161	22.3%	23.6%	20.9%	26.4%
51	Ben Lomond (5)	33,215	8,015	24.1%	27.0%	21.4%	33.4%
2	Downtown Ogden (7)	21,684	3,209	14.8%	14.1%	9.5%	20.4%
52	Morgan/East Weber Co. (6)	24,131	6,380	26.4%	27.5%	22.2%	33.4%
50	Riverdale (10)	15,522	3,708	23.9%	26.7%	19.8%	34.9%
36	Roy/Hooper (9)	27,898	5,652	20.3%	23.1%	17.6%	29.6%
22	South Ogden (8)	26,255	5,527	21.1%	21.1%	15.6%	28.0%

*State rank is by 61 small areas for age-adjusted rate; 1 is always the lowest rate in the state and 61 is always the highest rate in the state.

8. Doctor-diagnosed High Cholesterol

Figure 8.2: Dr. Dx High Cholesterol by Small Area, Utah Adults Aged 18+, 2001, 2003, 2005 (Age-adjusted)



8. Doctor-diagnosed High Cholesterol

Figure 8.3: Dr. Dx High Cholesterol by Small Area, Wasatch Front Adults 18+, 2001, 2003, 2005 (Age-adjusted)